

The Hawaii-based Longline Logbook Summary Report

October-December 2006¹

Pacific Islands Fisheries Science Center
Fishery Monitoring and Economics Program

All Federal longline logbook data for trips completed in the fourth quarter of 2006 by Hawaii-based longline vessels have been received and processed and are summarized in this report (Table 1). The report includes most data from trips that began late in the fourth quarter and continued into the first quarter of 2007, but data from such trips may still be forthcoming; hence, this report should be considered preliminary. Updates will be made available in the online edition of the report at <http://www.pifsc.noaa.gov/fmsd/reports.php>.

The shallow-set fishery targeting swordfish was closed on March 20, 2006 for the remainder of the year because it had reached its designated 2006 annual limit of 17 interactions with loggerhead sea turtles. However, the deep-set longline fishery for tunas continued to operate. Catches of bigeye tuna east of 150° W longitude were prohibited from July 7, 2006 throughout the rest of the year to comply with the 150 metric ton quota for U.S. longline vessels established under Resolution C-04-09 of the Inter-American Tropical Tuna Commission, a measure to conserve bigeye tuna in the eastern Pacific Ocean.

A total of 120 vessels were active in the fishery during the fourth quarter of 2006, 3 more than in the same period of 2005 (Fig. 1). There were 453 longline trips, 14 fewer than in the fourth quarter of 2005. All trips in the fourth quarter were deep-set, tuna-targeted trips (Fig. 2). A fourth quarter record of 10.8 million hooks were set, almost 1 million more than in the fourth quarter of 2005 (Fig. 3). The largest proportion of hooks was set in the main Hawaiian Islands (MHI) Exclusive Economic Zone (EEZ) (49%) followed by waters outside the U.S. EEZ (28%) and in the Northwestern Hawaiian Islands (NWHI) EEZ (21%).

In the fourth quarter of 2006 the bigeye tuna catch was 46,944 fish (Fig. 4); 40% were caught in the MHI EEZ, 30% in the NWHI EEZ, and 28% outside of the U.S. EEZ. The bigeye tuna CPUE on tuna-targeted trips was 4.4 fish per 1000 hooks (Fig. 5). The albacore catch (793 fish) and CPUE (0.1 fish per 1000 hooks) were down about 50% compared to the same period of 2005 (Figs. 6-7). The yellowfin tuna catch (6,373 fish) and CPUE (0.6 fish per 1000 hooks) were lower than in the same quarter of 2005 (Figs. 8-9). The fourth quarter swordfish catch (849 fish) decreased 66% from the same period in 2005 because of the March closure of the shallow-set fishery targeting this species (Fig. 10). Swordfish CPUE on tuna-targeted trips was only 0.1 fish per 1000 hooks (Fig. 11). The fourth quarter striped marlin catch (8,686 fish) and CPUE (0.8 fish per 1000 hooks) more than doubled compared to the same period of 2005 (Figs. 12-13). The blue marlin catch and CPUE were 1,545 fish and 0.1 fish per 1000 hooks, respectively (Figs. 14-15). A total of 21,428 sharks were caught in the fourth quarter of 2006, of which 4% (750) were kept. Blue shark comprised 88% of the total shark catch (18,911 fish) (Fig. 16). Blue shark CPUE on tuna-targeted trips was 1.8 fish per 1000 hooks (Fig. 17).

Annual summary statistics for 2006 are displayed in Table 2 and graphs of annual catch and fishing effort during 1991-2006 are presented in Figs. A1-A7. Additional quarterly and annual statistics for the Hawaii longline fishery are included in the online edition of the report.

¹ PIFSC Data Report DR-07-001
Issued 16 February 2007

Table 1. Quarterly summary report of fish catch statistics for U.S. longline vessels landing in Hawaii as derived from NMFS Western Pacific Daily Longline Fishing Log records. [PIFSC IMS, Longline Logbook Data, 2/16/2007 12:18:45PM]

Report Coverage					Number of vessels active	120
Time Period	4th Quarter 2006				Number of trips	453
Fishing Area	All Areas				Number of sets	5,055
Trip Types	All Trip Types				Number of hooks set	10,768,846

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE - Number Caught per 1000 hooks
Billfishes				
Blue marlin	1,545	1,520	25	0.14
Striped marlin	8,686	8,507	179	0.81
Shortbill spearfish	2,473	2,429	44	0.23
Swordfish	849	710	139	0.08
Other billfishes	184	180	4	0.02
Total	13,737	13,346	391	1.28
Sharks				
Blue shark	18,911	124	18,787	1.76
Mako sharks	566	315	251	0.05
Thresher sharks	1,311	144	1,167	0.12
Oceanic whitetip shark	183	21	162	0.02
Silky shark	55		55	0.01
Other sharks	397	146	251	0.04
Total	21,423	750	20,673	1.99
Tunas				
Albacore	793	787	6	0.07
Bigeye tuna	46,944	45,316	1,628	4.36
Yellowfin	6,373	6,191	182	0.59
Bluefin tuna	3	3		0.00
Skipjack tuna	3,091	2,828	263	0.29
Other tunas	13	12	1	0.00
Total	57,217	55,137	2,080	5.31
Other PMUS				
Mahimahi	11,477	11,270	207	1.07
Moonfish	3,441	3,425	16	0.32
Wahoo	2,871	2,852	19	0.27
Oilfish	6,389	6,306	83	0.59
Pomfret	12,169	12,016	153	1.13
Total	36,347	35,869	478	3.38
Total PMUS	128,724	105,102	23,622	11.95
Total Non-PMUS	1,810	165	1,645	0.17
Total All Species	130,534	105,267	25,267	12.12

Table 2. Yearly summary report of fish catch statistics for U.S. longline vessels landing in Hawaii as derived from NMFS Western Pacific Daily Longline Fishing Log records. [PIFSC IMS, Longline Logbook Data, 2/16/2007 12:40:08PM]

Report Coverage		<div> <div>Number of vessels active127</div> <div>Number of trips1,437</div> <div>Number of sets17,247</div> <div>Number of hooks set35,192,344</div> </div>		
Time Period	2006			
Fishing Area	All Areas			
Trip Types	All Trip Types			

Pelagic Management Unit Species (PMUS)	Number Caught	Number Kept	Number Released	CPUE - Number Caught per 1000 hooks
Billfishes				
Blue marlin	5,693	5,640	53	0.16
Striped marlin	20,966	20,679	287	0.60
Shortbill spearfish	11,896	11,762	134	0.34
Swordfish	16,575	15,393	1,182	0.47
Other billfishes	510	497	13	0.01
Total	55,640	53,971	1,669	1.58
Sharks				
Blue shark	58,499	259	58,240	1.66
Mako sharks	2,861	1,178	1,683	0.08
Thresher sharks	4,750	380	4,370	0.13
Oceanic whitetip shark	999	46	953	0.03
Silky shark	197	4	193	0.01
Other sharks	1,028	160	868	0.03
Total	68,334	2,027	66,307	1.94
Tunas				
Albacore	11,407	11,235	172	0.32
Bigeye tuna	118,283	115,302	2,981	3.36
Yellowfin	30,531	29,524	1,007	0.87
Bluefin tuna	8	8		0.00
Skipjack tuna	12,954	12,067	887	0.37
Other tunas	41	40	1	0.00
Total	173,224	168,176	5,048	4.92
Other PMUS				
Mahimahi	52,481	51,677	804	1.49
Moonfish	12,792	12,731	61	0.36
Wahoo	17,123	17,009	114	0.49
Oilfish	23,758	23,307	451	0.68
Pomfret	42,997	42,615	382	1.22
Total	149,151	147,339	1,812	4.24
Total PMUS	446,349	371,513	74,836	12.68
Total Non-PMUS	7,585	1,625	5,960	0.22
Total All Species	453,934	373,138	80,796	12.90

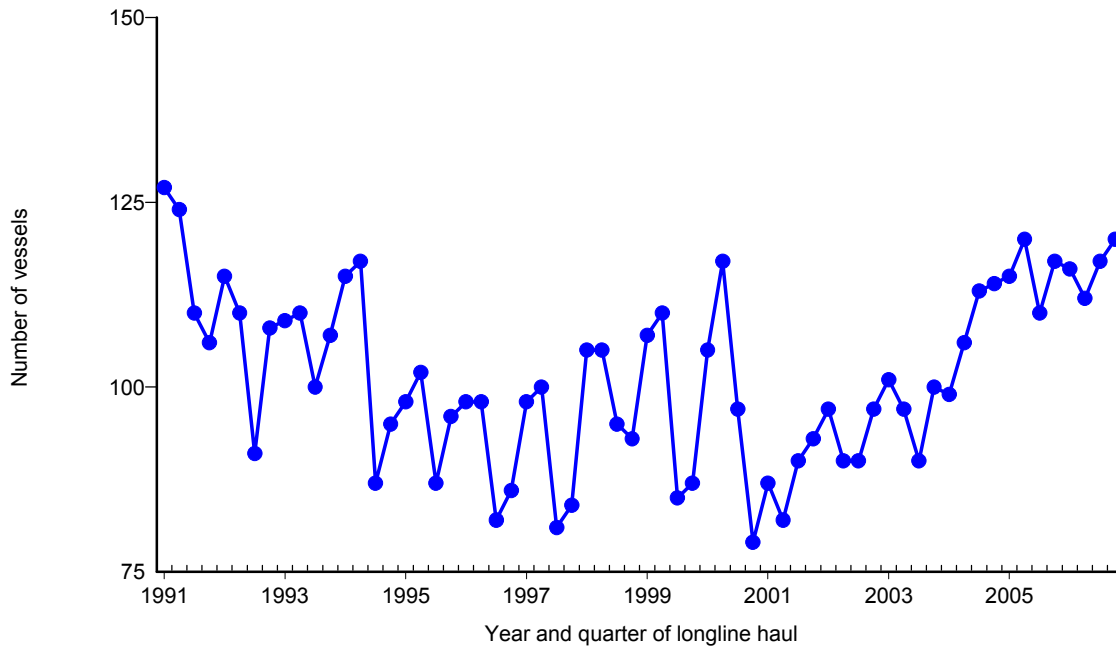


Figure 1. Number of active longline vessels based and landing in Hawaii, by quarter, 1991-2006. [PIFSC IMS, Longline Logbook Data, 2/16/2007 12:22:51PM]

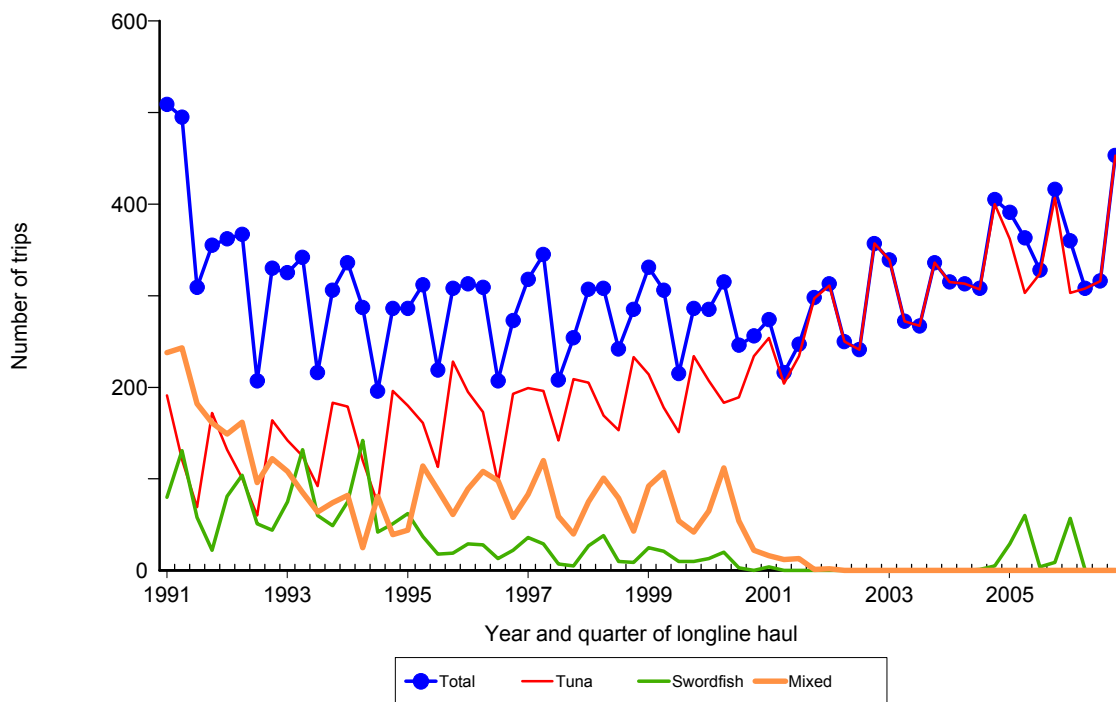


Figure 2. Number of fishing trips by longline vessels based and landing in Hawaii, by quarter and trip type, 1991-2006. [PIFSC IMS, Longline Logbook Data, 2/16/2007 12:22:51PM]

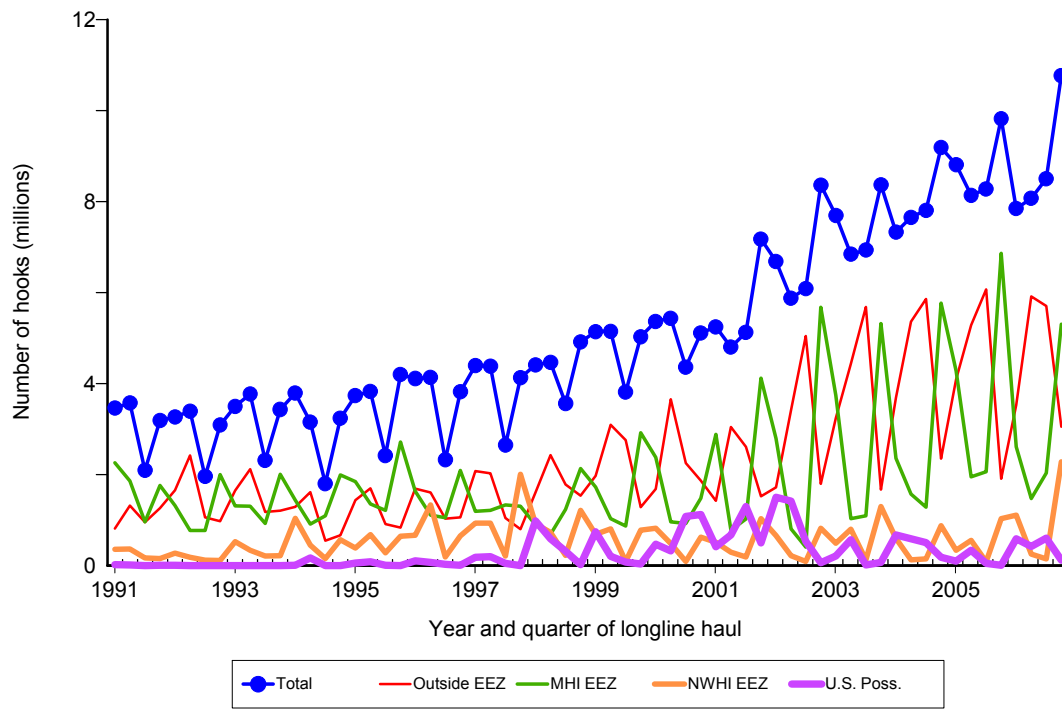


Figure 3. Number of hooks set by longline vessels based and landing in Hawaii, by quarter and fishing area, 1991-2006. [PIFSC IMS, Longline Logbook Data, 2/16/2007 12:22:55PM]

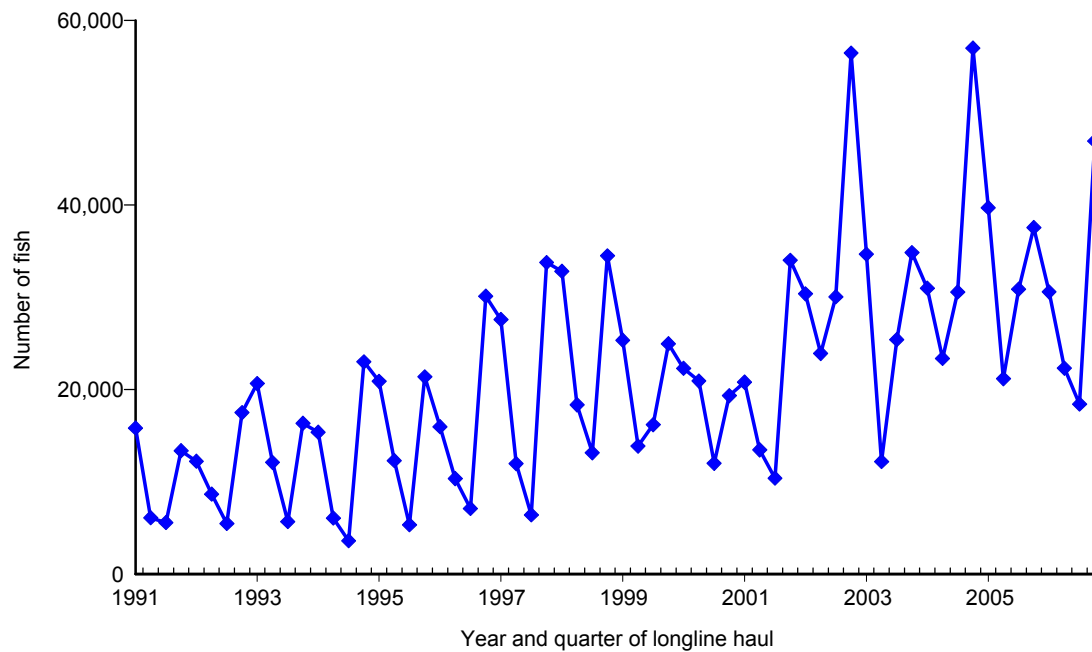


Figure 4. Quarterly catch of bigeye tuna by longline vessels based and landing in Hawaii, 1991-2006. [PIFSC IMS, Longline Logbook Data, 2/16/2007 12:23:27PM]

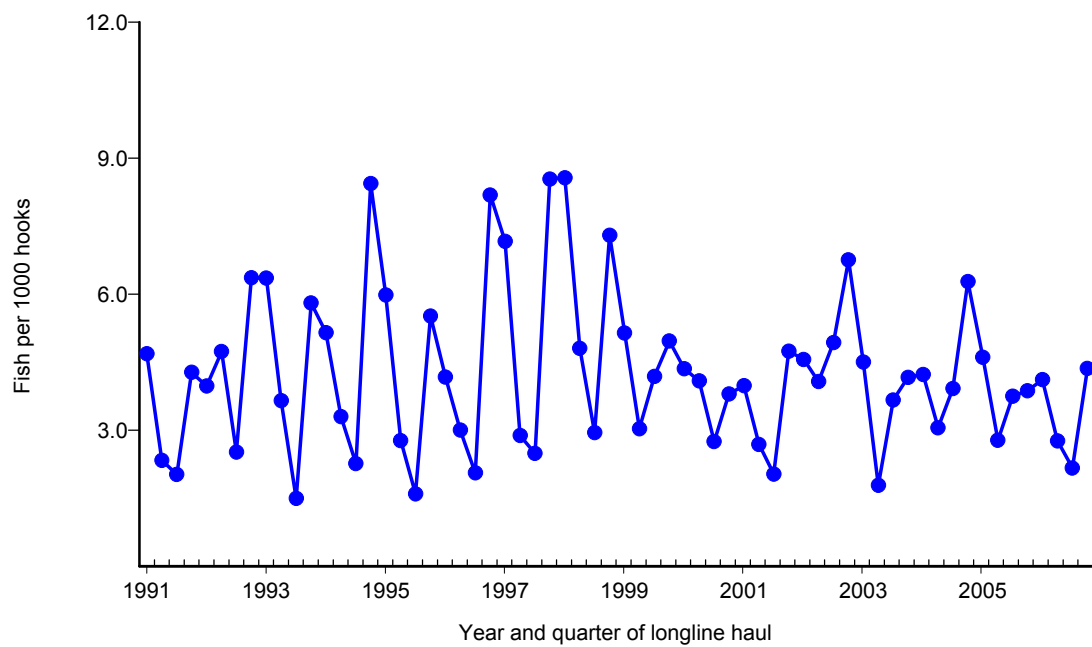


Figure 5. Quarterly CPUE of bigeye tuna (fish per 1000 hooks) on tuna trips by longline vessels based and landing in Hawaii, 1991-2006. [PIFSC IMS, Longline Logbook Data, 2/16/2007 12:23:27PM]

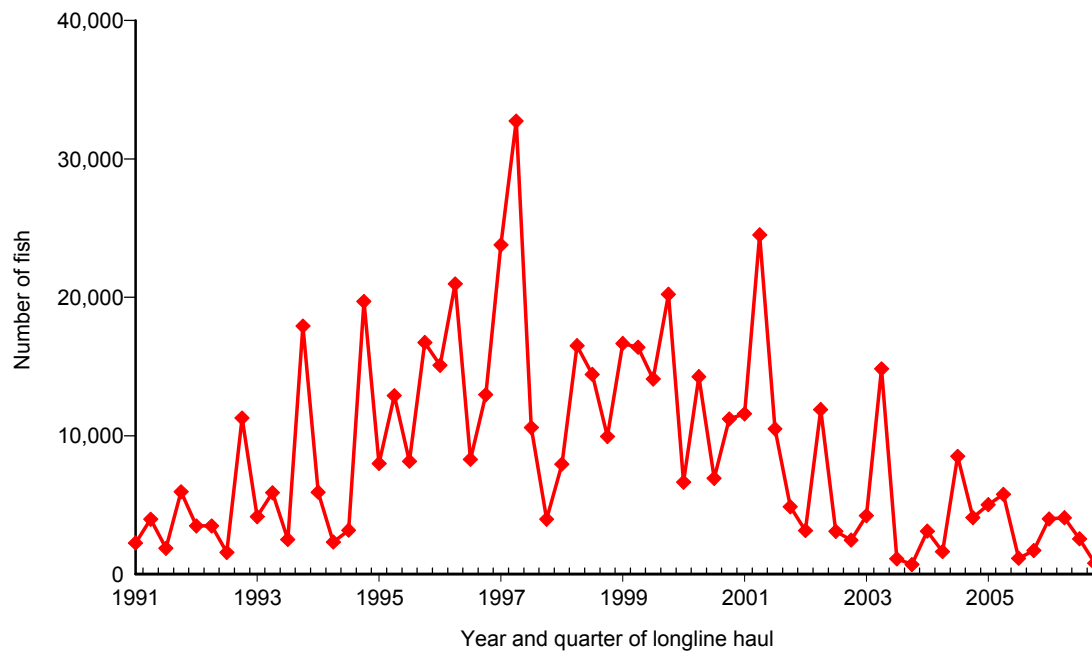


Figure 6. Quarterly catch of albacore by longline vessels based and landing in Hawaii, 1991-2006. [PIFSC IMS, Longline Logbook Data, 2/16/2007 12:24:03PM]

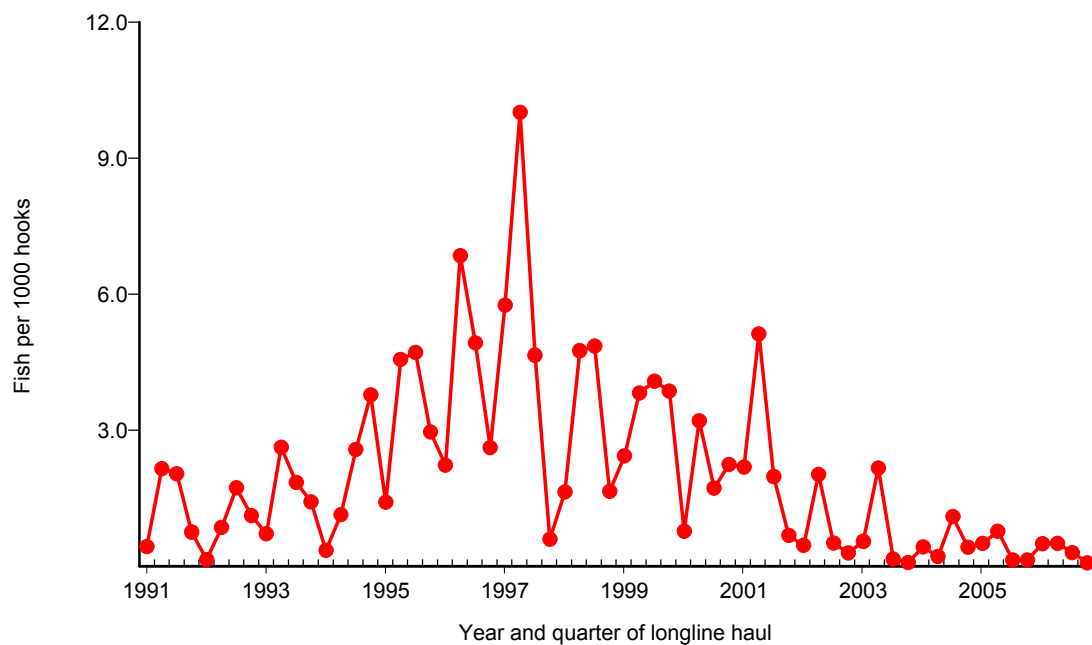


Figure 7. Quarterly CPUE of albacore (fish per 1000 hooks) on tuna trips by longline vessels based and landing in Hawaii, 1991-2006. [PIFSC IMS, Longline Logbook Data, 2/16/2007 12:24:03PM]

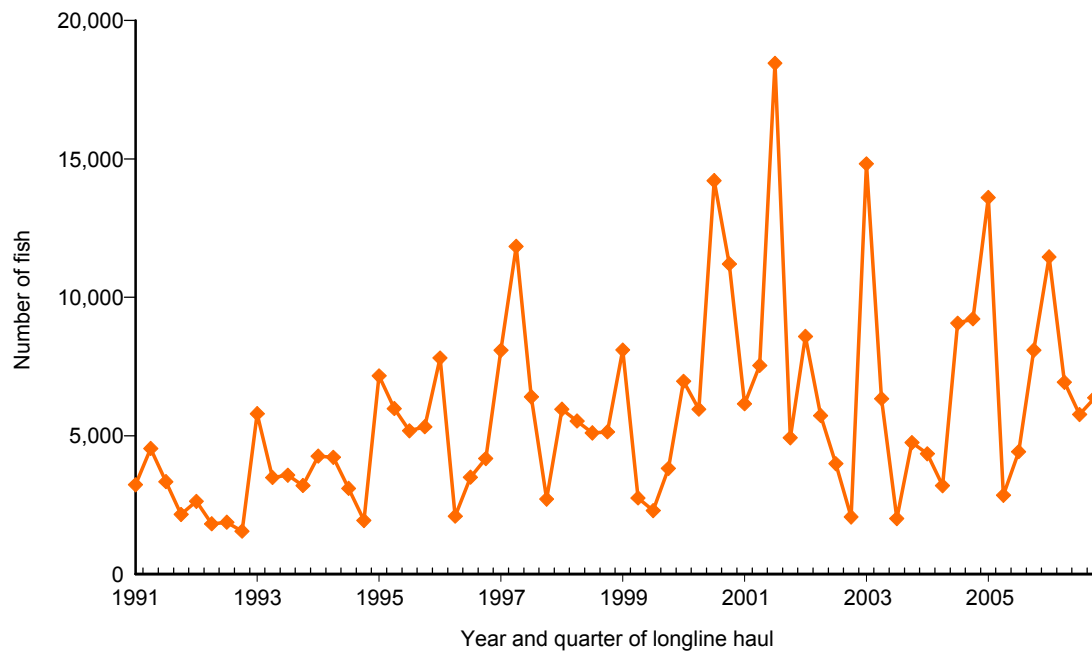


Figure 8. Quarterly catch of yellowfin tuna by longline vessels based and landing in Hawaii, 1991-2006. [PIFSC IMS, Longline Logbook Data, 2/16/2007 12:24:38PM]

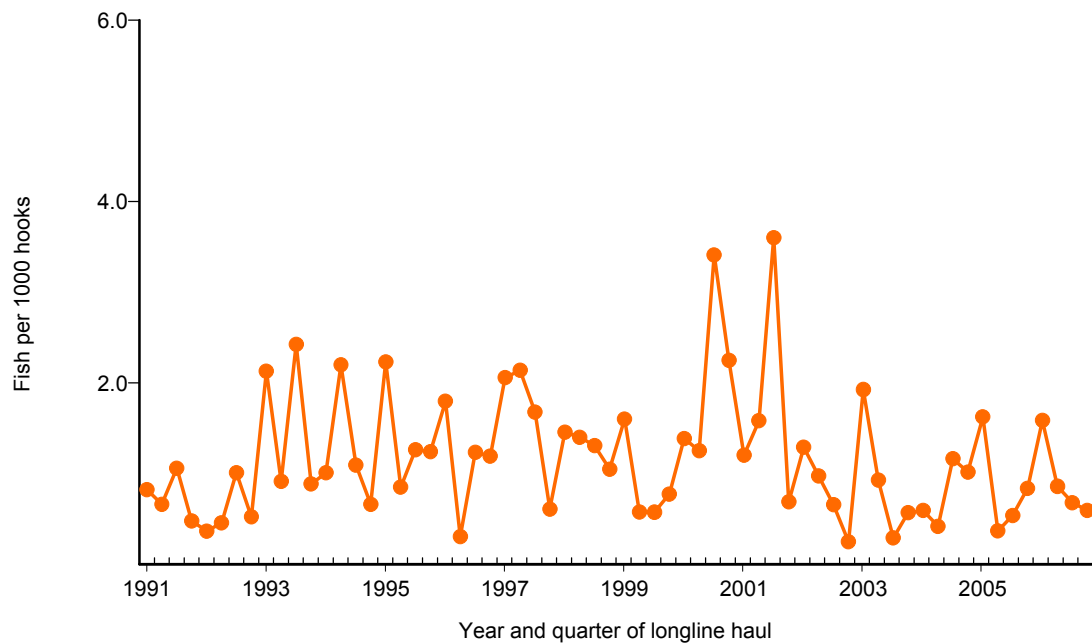


Figure 9. Quarterly CPUE of yellowfin tuna (fish per 1000 hooks) on tuna trips by longline vessels based and landing in Hawaii, 1991-2006. [PIFSC IMS, Longline Logbook Data, 2/16/2007 12:24:38PM]

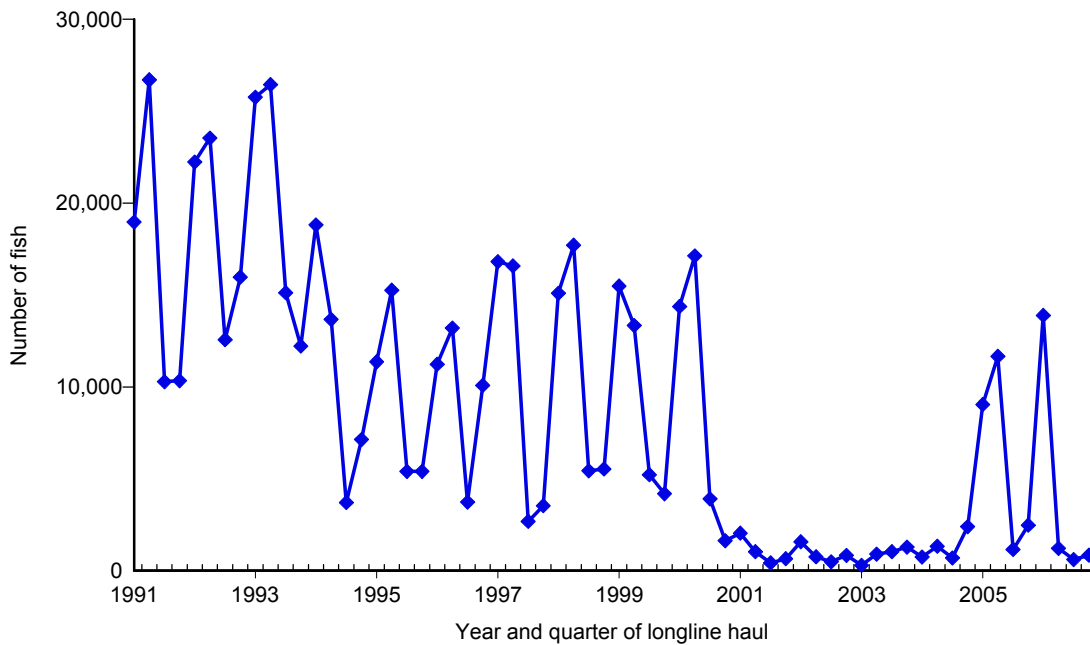


Figure 10. Quarterly catch of swordfish by longline vessels based and landing in Hawaii, 1991-2006. [PIFSC IMS, Longline Logbook Data, 2/16/2007 8:23:07AM]

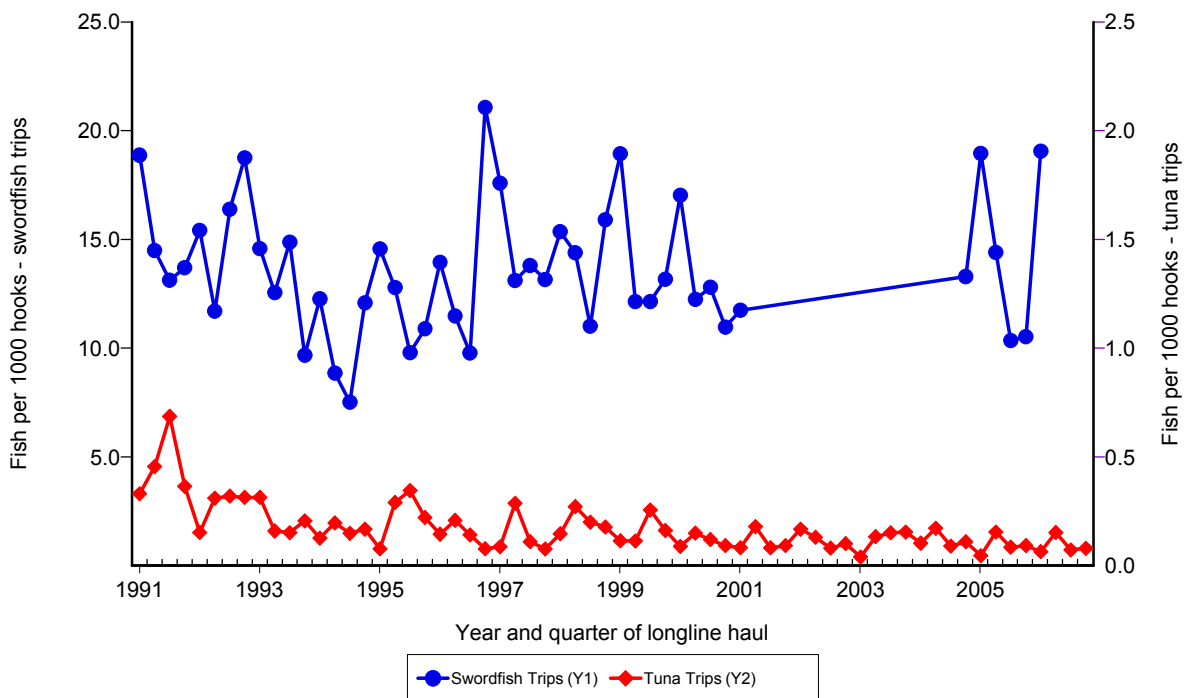


Figure 11. Quarterly CPUE of swordfish (fish per 1000 hooks) on swordfish trips and tuna trips by longline vessels based and landing in Hawaii, 1991-2006. [PIFSC IMS, Longline Logbook Data, 2/16/2007 8:23:07AM]

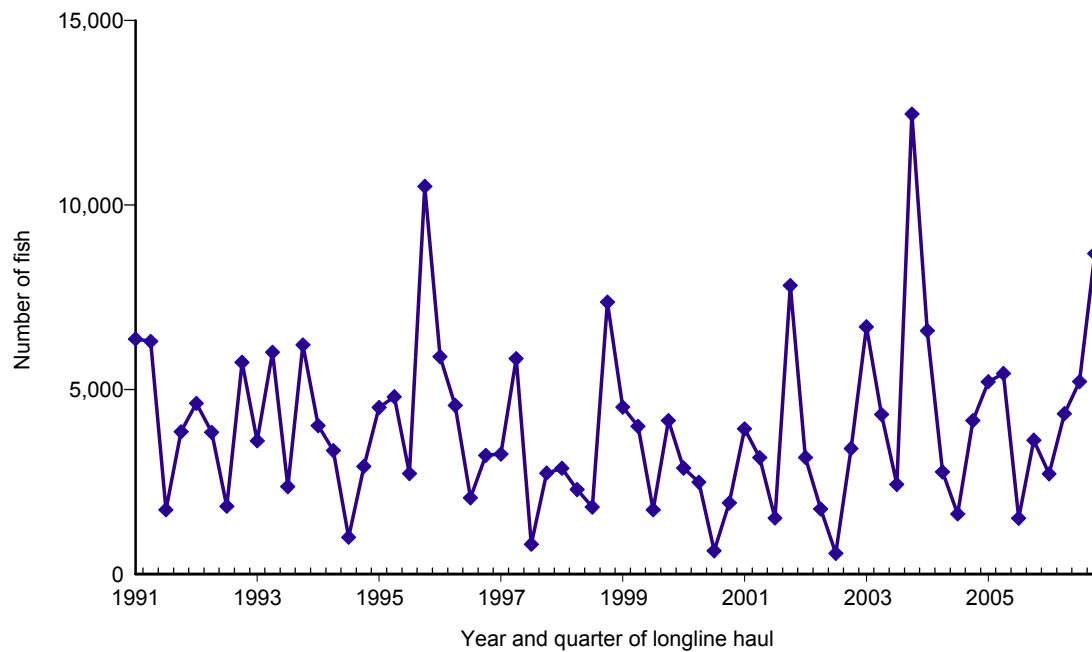


Figure 12. Quarterly catch of striped marlin by longline vessels based and landing in Hawaii, 1991-2006. [PIFSC IMS, Longline Logbook Data, 2/16/2007 12:25:50PM]

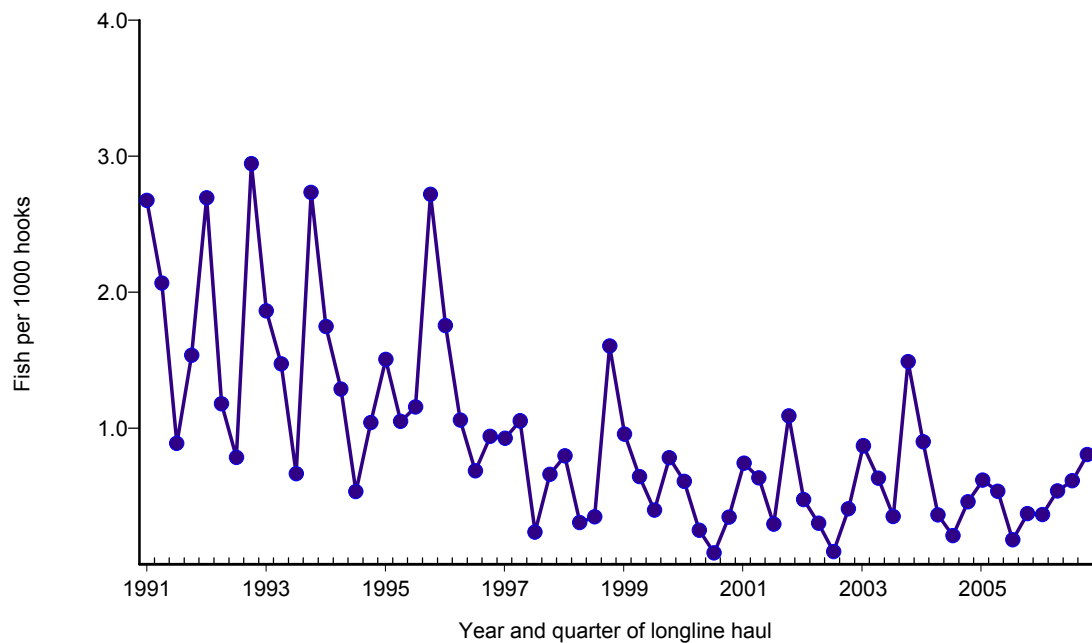


Figure 13. Quarterly CPUE of striped marlin (fish per 1000 hooks) on tuna trips by longline vessels based and landing in Hawaii, 1991-2006. [PIFSC IMS, Longline Logbook Data, 2/16/2007 12:25:50PM]

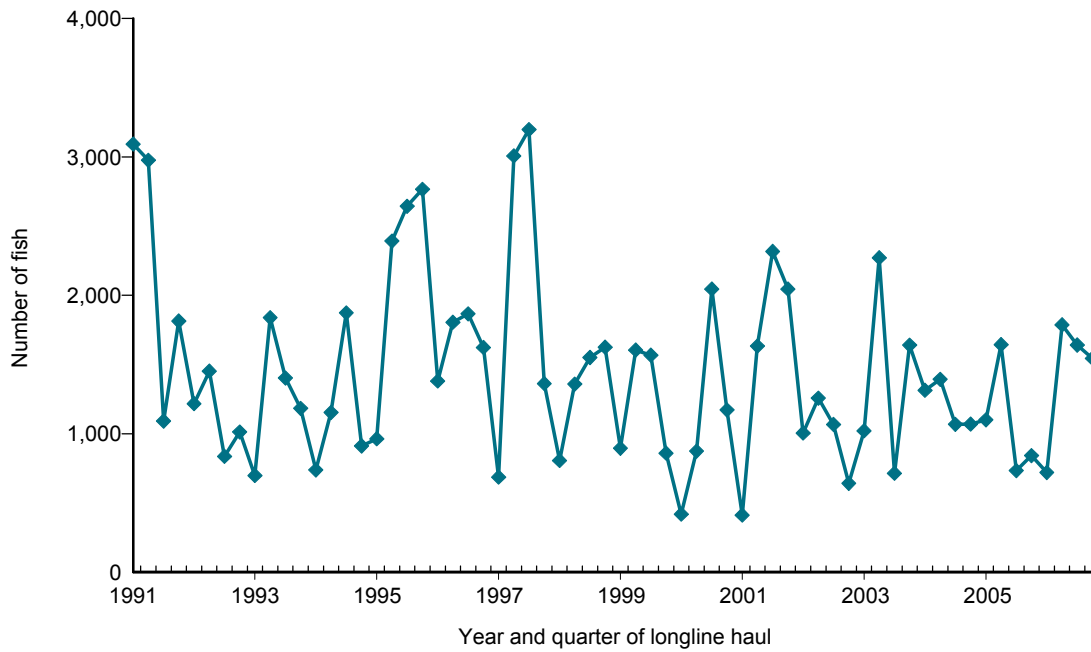


Figure 14. Quarterly catch of blue marlin by longline vessels based and landing in Hawaii, 1991-2006. [PIFSC IMS, Longline Logbook Data, 2/16/2007 12:26:25PM]

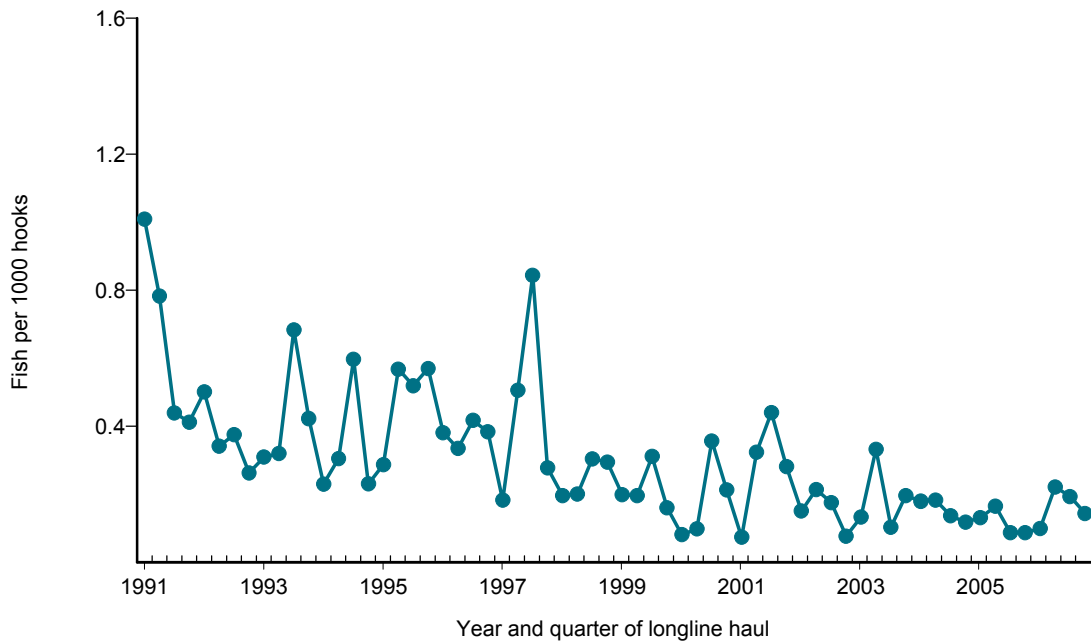


Figure 15. Quarterly CPUE of blue marlin (fish per 1000 hooks) on tuna trips by longline vessels based and landing in Hawaii, 1991-2006. [PIFSC IMS, Longline Logbook Data, 2/16/2007 12:26:25PM]

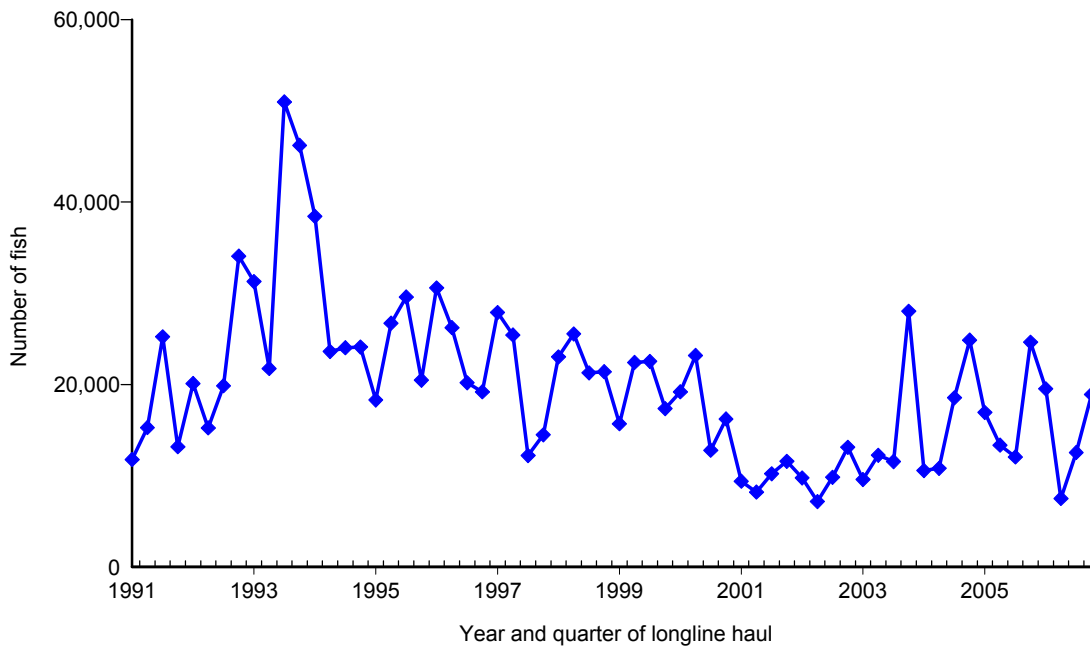


Figure 16. Quarterly catch of blue shark by longline vessels based and landing in Hawaii, 1991-2006. [PIFSC IMS, Longline Logbook Data, 2/16/2007 9:41:26AM]

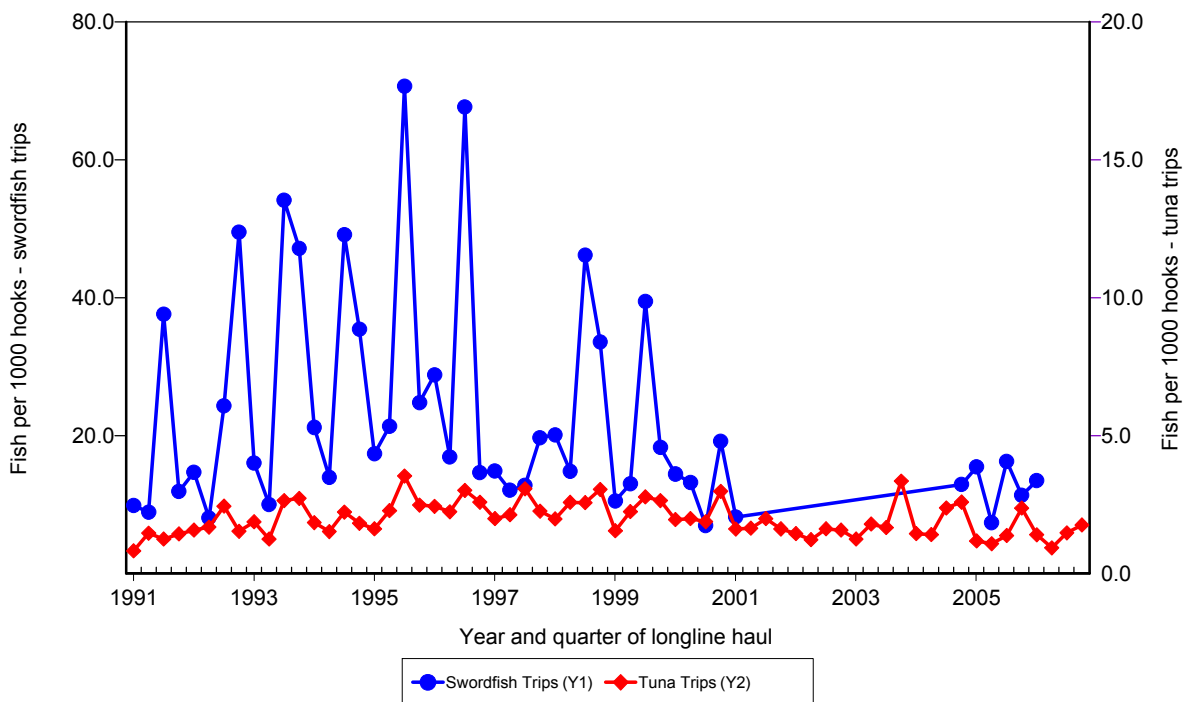


Figure 17. Quarterly CPUE of blue shark (fish per 1000 hooks) on swordfish trips and tuna trips by longline vessels based and landing in Hawaii, 1991-2006. [PIFSC IMS, Longline Logbook Data, 2/16/2007 9:41:26AM]

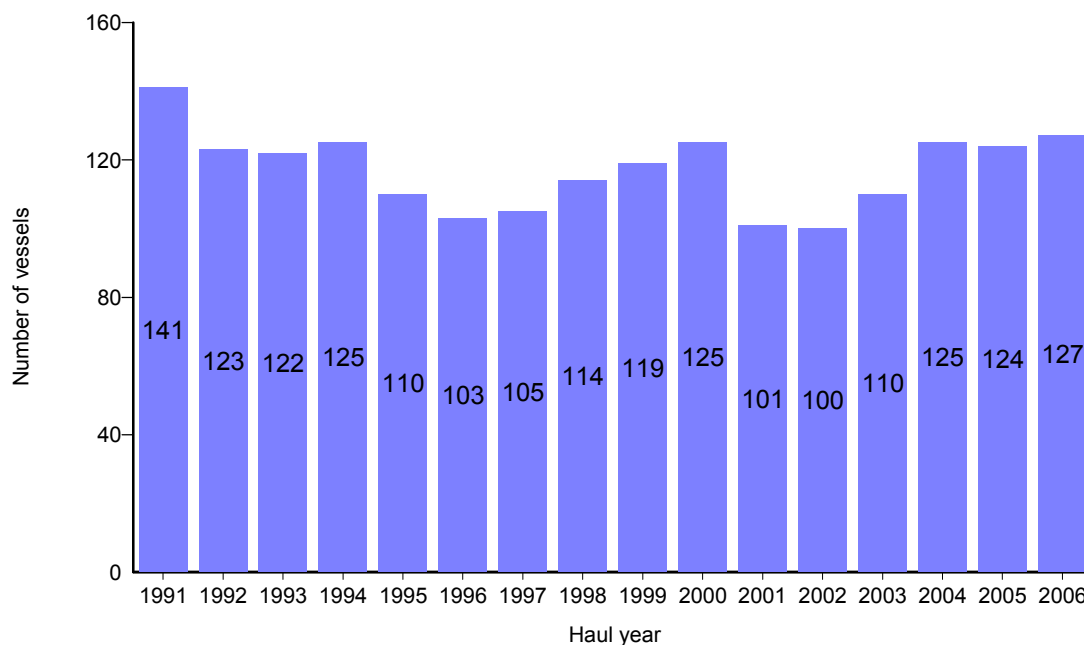


Figure A1. Number of active longline vessels based and landing in Hawaii, by year, 1991-2006. [PIFSC IMS, Longline Logbook Data, 2/16/2007 12:29:59PM]

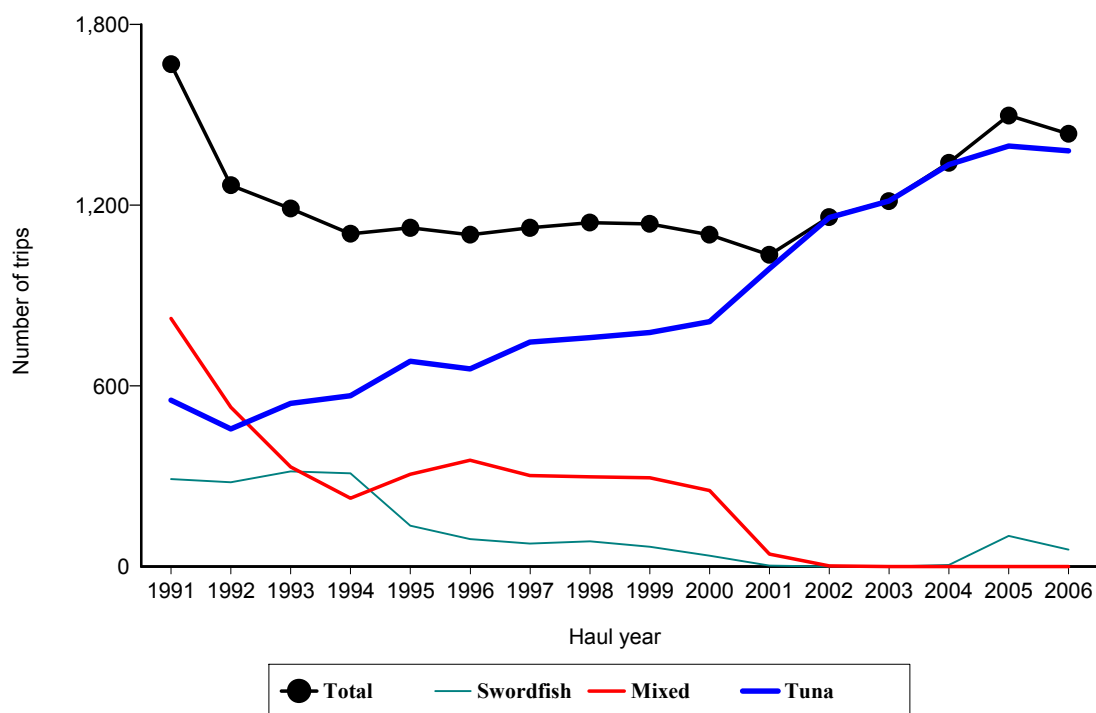


Figure A2. Number of fishing trips by longline vessels based and landing in Hawaii, by year and trip type, 1991-2006. [PIFSC IMS, Longline Logbook Data, 2/16/2007 12:29:59PM]

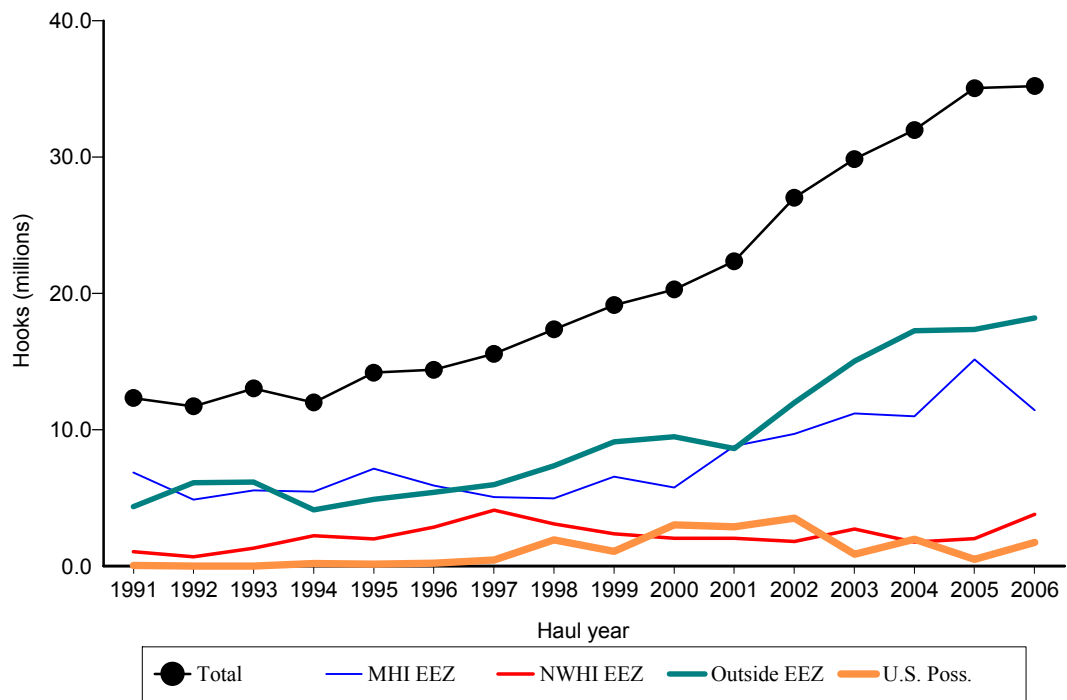


Figure A3. Number of hooks set by longline vessels based and landing in Hawaii, by year and fishing area, 1991-2006. [PIFSC IMS, Longline Logbook Data, 2/16/2007 12:30:03PM]

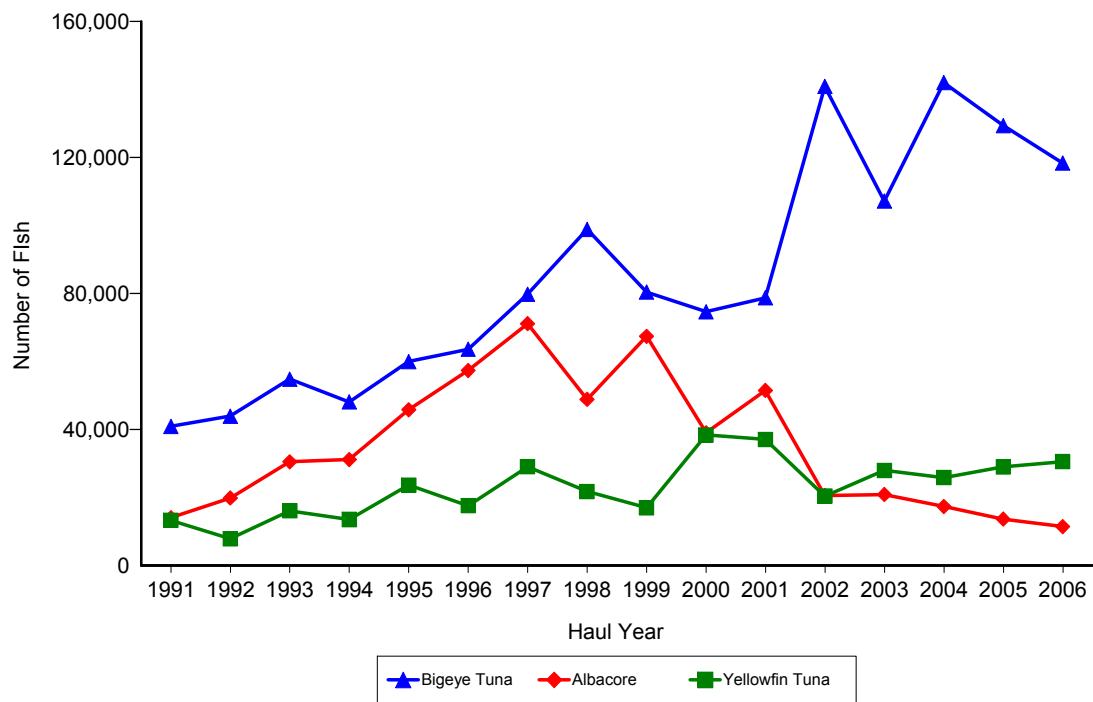


Figure A4. Annual catch of albacore, bigeye tuna, and yellowfin tuna by longline vessels based and landing in Hawaii, 1991-2006. [2/16/2007 12:30:37PM]

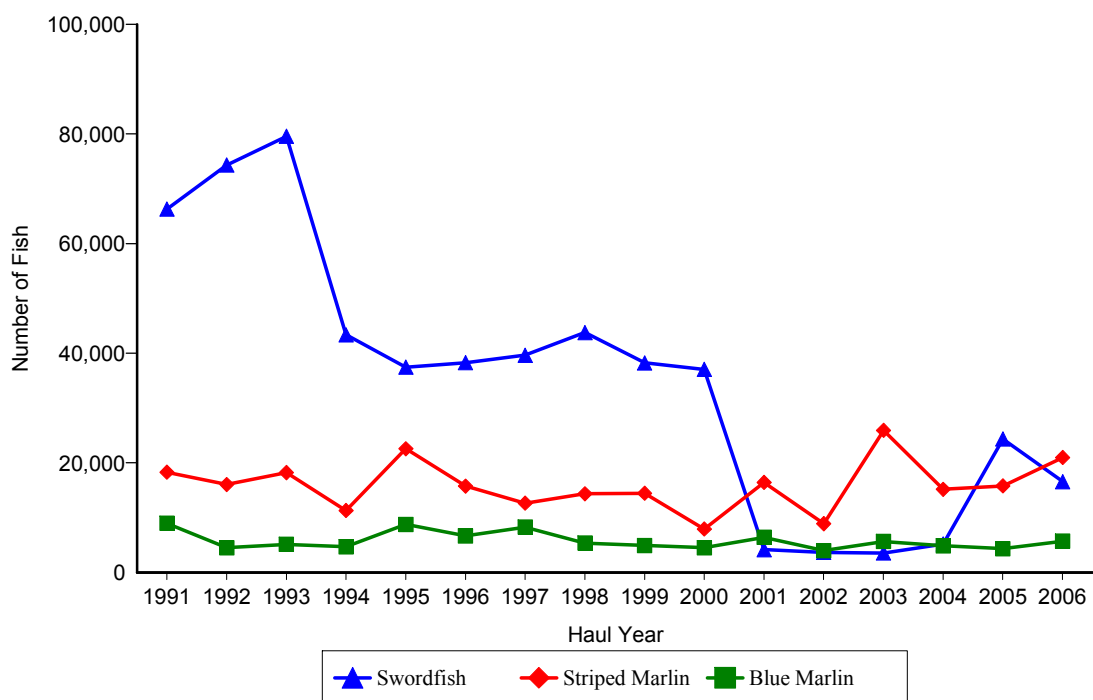


Figure A5. Annual catch of blue marlin, striped marlin, and swordfish by longline vessels based and landing in Hawaii, 1991-2006. [PIFSC IMS, Longline Logbook Data, 2/16/2007 12:30:37PM]

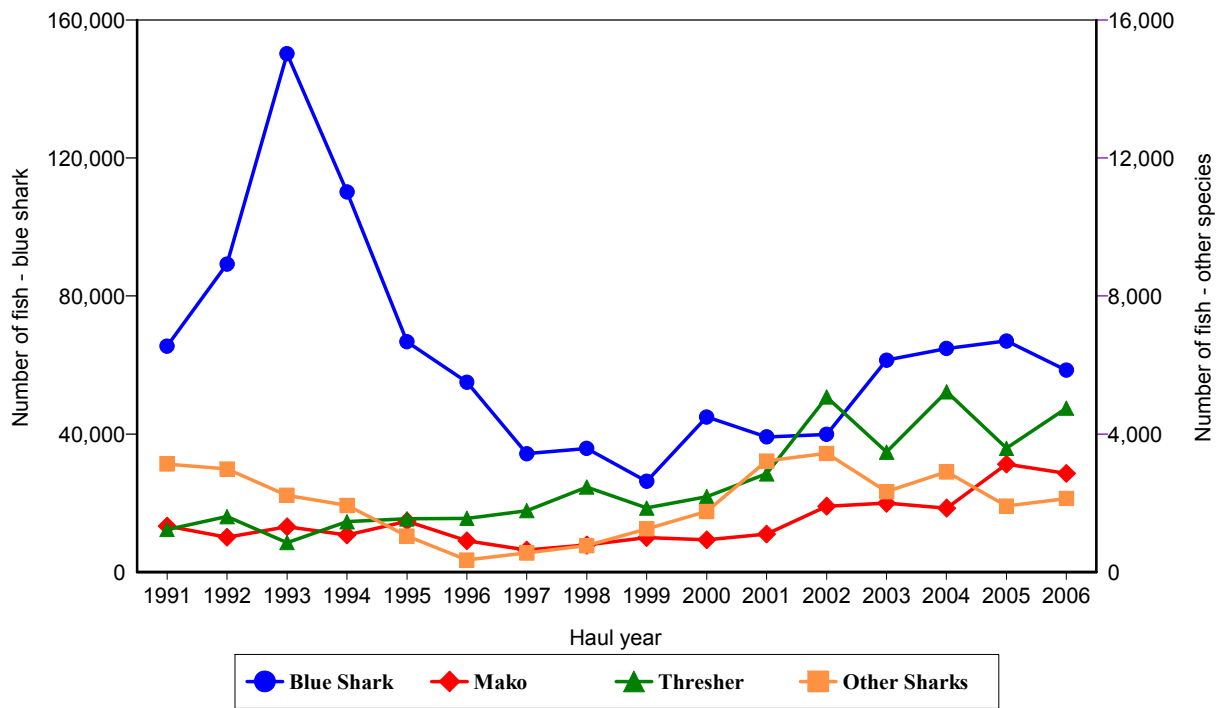


Figure A6. Annual catch of blue shark, mako shark, thresher shark, and other sharks by longline vessels based and landing in Hawaii, 1991-2006. [PIFSC IMS, Longline Logbook Data, 2/16/2007 12:30:37PM]

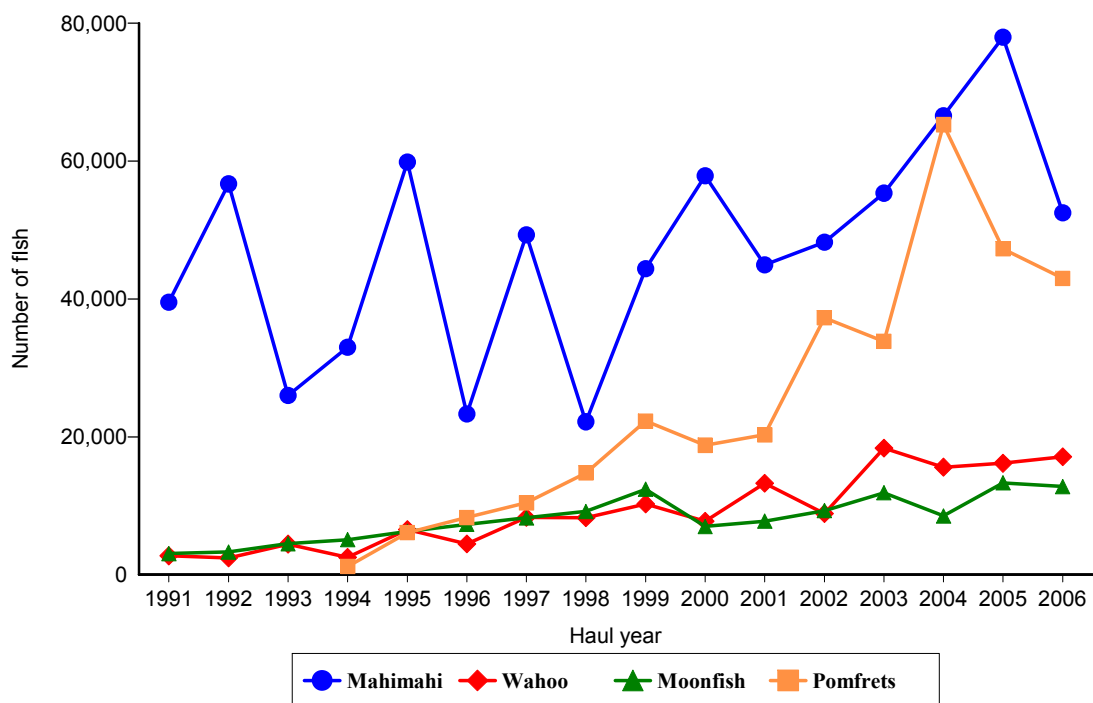


Figure A7. Annual catch of mahimahi, moonfish, pomfret, and wahoo by longline vessels based and landing in Hawaii, 1991-2006. [PIFSC IMS, Longline Logbook Data, 2/16/2007 12:30:37PM]